

**Notice of Allowability**

Application No.

09/472,558

Examiner

Ram R. Shukla

Applicant(s)

BAHRAMIAN ET AL.

Art Unit

1632

**-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--**

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 9/14/04.
2. ☒ The allowed claim(s) is/are 11,14 and 58-60.
3. ☒ The drawings filed on 27 December 1999 are accepted by the Examiner.
4. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).  
a) ☐ All    b) ☐ Some\*    c) ☐ None    of the:  
1. ☐ Certified copies of the priority documents have been received.  
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.  
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

5. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
6. ☐ CORRECTED DRAWINGS ( as "replacement sheets") must be submitted.  
(a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review ( PTO-948) attached  
1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.  
(b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
7. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152)           |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                                | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),<br>Paper No./Mail Date _____ | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material          | 8. <input checked="" type="checkbox"/> Examiner's Statement of Reasons for Allowance  |
|   | 9. <input type="checkbox"/> Other _____   |

### EXAMINER'S AMENDMENT

1. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it MUST be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in a telephone interview with Peter Knudsen on 11/9/2004.

2. The application has been amended as follows:

#### IN THE CLAIMS:

Claims 28-49, 51, and 53-56 have been cancelled.

Claim 11 has been rewritten as follows:

A method for muting expression of a target gene in a population of animal cells in vitro, the method comprising:

(a) screening to identify a muting nucleic acid composition having a sequence that is homologous to a sequence in the target gene, the nucleic acid composition being double stranded, wherein screening to identify comprises the steps of:

(i) synthesizing a plurality of nucleic acid composition homologous to all or part of the target gene and introducing said plurality of nucleic acid composition into a cultured population of animal cells;

(ii) selecting a nucleic acid composition that inhibits expression of the target gene in said cultured population of animal cells, thereby identifying said muting nucleic acid composition;

(b) delivering the muting nucleic acid composition into a population of animal cells in vitro; and

(c) muting expression of the target gene in said animal cells, wherein said muting nucleic acid composition inhibits expression of the target gene.

3. Claims 11, 14 and 58-60 have been allowed.

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4. The following is an examiner's statement of reasons for allowance:

The claimed invention is free of the prior art of record because the prior art of record does not teach a method of inhibiting expression of a target gene in an animal cell in vitro using a double stranded nucleic acid wherein there is a step of screening for the inhibiting nucleic acid from a plurality of nucleic acid composition that are homologous to all or part of the target gene.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

5. Examiner's Comments:

6. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 9/14/04 has been entered. The 131 declaration filed under 37 CFR 1.131 has been fully considered and has been found to be persuasive to withdraw the 102(e) rejection in the office action of 06/01/2004. Additionally, it is noted that while the art of record (US Patent 6,531,674, B1, 11 March 2003) teaches a gene silencing method in plants, such a method has not been taught in an animal cell. Applicants' attorney Mr. Knudsen was contacted on 11/8/04 to indicate allowable subject matter, however, Mr. Knudsen was also informed of minor issues about the format of the claims and was advised to submit a proposed amendment to claim 11 that the examiner could review. Mr. Knudsen submitted a proposed amendment to the claims to which examiner suggested some additional changes. Finally, the claim language was approved on 11/9/04. The proposed changes to claim 11 agreed upon have been incorporated in the Examiner's Amendment.

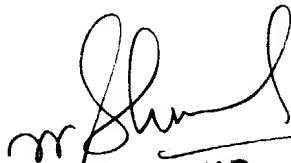
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ram R. Shukla whose telephone number is (571) 272-0735 . The examiner can normally be reached on Monday through Friday

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from 7:30 am to 4:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson, can be reached at (571) 272-0804. The fax phone number for TC 1600 is (703) 872-9306. Any inquiry of a general nature, formal matters or relating to the status of this application or proceeding should be directed to the Dianiece Jacobs whose telephone number is (571) 272-0532.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Ram R. Shukla, Ph.D.  
Primary Examiner  
Art Unit 1632

  
**RAM R. SHUKLA, PH.D.**  
**PRIMARY EXAMINER**